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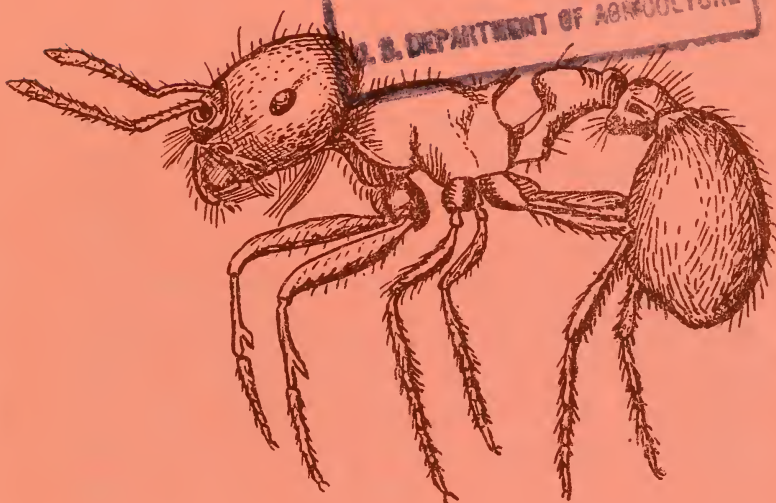


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# THE RED HARVESTER ANT

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BUREAU OF  
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The RED HARVESTER ANT destroys many kinds of plants in the Southwestern States. This ant collects and stores seeds, including those of alfalfa, clovers, small grains, grasses, and the sunflower. It makes its raid within several hundred feet of its nest.

The sting and bite of these ants are annoying to man and to domestic animals. Milk production is often reduced after cows have been attacked.

### Signs of an Infestation

One of the first signs of the activity of these ants is a smooth, circular area in lawns, fields of alfalfa, small grain, or pasture crops. The ants clear all vegetation around the entrance to their underground nest for varying distances, depending upon the size of the colony. The nest usually has one entrance, but nests of large colonies may have two or more. The entrance holes vary in size. Many are only  $1/4$  to  $1/2$  inch in diameter; others may be much larger. There are no pronounced mounds around them.

Another, more painful way to learn that the red harvester ant has established itself under a lawn or pasture is to walk over a nest without proper protective clothing. It has strong jaws with which it inflicts painful bites.

The full-grown worker ant, which is the only form normally appearing above ground, is wingless, from  $1/4$  to  $1/2$  inch long, reddish-brown, and stoutly built.

To avoid bites or stings when working where these ants occur, wear knee-length boots or shoes with the trouser legs tucked in, and stamp your feet on the ground frequently.

### Effect of Weather on Ant Activity

The ants are most active above ground on warm, sunny days, especially in late fall and early spring. In hot weather, however, they may remain in the nest during the middle of the day. In very warm areas, as in the low valleys of southern Arizona, the colonies may continue their activities on sunny days throughout the winter.

### Nest Size in Relation to Control

Success in controlling the red harvester ant is related closely to the size of the colony. Large, established colonies are very difficult to destroy because of the network of small chambers and their connecting tunnels. In porous soil these chambers and tunnels may extend downwards in an inverted cone to a depth of 15 feet or more, whereas in more compact soils most of them are within a foot of the soil surface. Nevertheless, thorough and persistent control efforts will reduce their activities to a low level and eventually eradicate them. Small colonies are much easier to control, as the underground nests are small and shallow.

Take measures to get rid of these colonies as soon as possible after you detect them.

## Control with Dusts

When many of the ants are active on the surface, use a dust.

Dieldrin. --One of the most effective and easily applied dusts contains 2 percent of dieldrin. Spread about 1/2 pound thinly in a continuous band, 4 to 6 inches wide, making a circle 5 to 6 feet in diameter centering at the nest entrance. A hand scoop is convenient for this treatment. For small colonies, with a cleared area less than 6 feet in diameter, place the band of dust around the edge of the cleared area.

In the larger colonies new entrances may open outside the dust ring. Treat these entrances individually or include them in the same ring with the original entrance when making the next application. If the band of dust is broken or washed away by rain or irrigation water, apply a new band.

Chlordane. --A 5-percent chlordane dust applied at the same dosage and in the same manner will give fairly good control. It will not remain effective so long as the dieldrin; therefore, more applications are usually required to subdue the ant colonies.

For best results apply these dusts during warm periods when there is little wind. In areas where irrigation is practiced, apply them as soon as possible after the surface of the flooded land has dried.

Dieldrin and chlordane dusts are poisonous to man and animals, but with care they can be used safely at the concentration recommended. Store the dusts away from children and domestic animals. Keep them off the skin and away from the eyes, nose, and mouth. Wear a respirator while applying a dust, and stay on the windward side of the spot where the dust is being released. Bathe thoroughly and change to clean clothing after dusting.

In the event of poisoning with dusts, call a physician immediately. Wash thoroughly with soap and water. Take a tablespoonful of salt in a glass of warm water to induce vomiting and repeat until the vomit fluid is clear. Lie down and remain quiet.

Do not dust vegetation that may be eaten by man, dairy animals, or animals being finished for slaughter, and do not leave lumps or piles of dust around treated areas. Do not apply the dust broadcast.

Both dieldrin and chlordane dusts are available commercially.

### Control with Liquid Fumigants

When practically all the ants are in the nest, use a fumigant.

Carbon disulfide.--It is possible to kill a high percentage of ants, even in large colonies, with a single application of carbon disulfide. Small colonies, which have cleared an area not more than 4 feet in diameter, may be treated by pouring 4 fluid ounces into

the entrance hole and stamping dirt into it with the heel of the shoe.

Colonies having cleared larger areas require more fumigant. Such colonies should be prepared the day before the treatment is made.

To prepare a colony for treatment remove a 6-inch layer of soil from an area 3 to 6 feet in diameter surrounding the colony entrance. The extent of excavation will depend on the size of the colony and the evident lateral expanse of the tunnels and chambers in the first 6 inches of soil. Removal of the layer of dirt exposes the vertical tunnels which lead to the chambers at various levels. These tunnels are about the diameter of a lead pencil.

In a day the ants will remove dirt and other debris which clog the tunnels and would retard penetration by the fumigant. On the following day pour 8 fluid ounces of carbon disulfide into the exposed vertical tunnels, distributing it equally among them. Close the openings with firm soil and replace the layer of dirt that was removed to expose the tunnels.

Make subsequent applications directly into the original entrance or into new entrances that may be opened at some distance from the old one, without removing a layer of soil. For re-treatments use 4 fluid ounces of carbon disulfide per colony.

Apply carbon disulfide in the early morning or late evening. Never apply it at midday.



Methyl bromide. --This fumigant has given good control of ant colonies in moist soil. It has not been satisfactory in dry, sandy soil. Use a mechanical dispenser that will release it into the colony entrance 6 to 8 inches below ground level. One such dispenser holds a 1-pound can of methyl bromide, and is fitted with a release valve and several feet of flexible tubing, tipped with a short brass or copper tube for insertion into the colony entrance. Apply 1 to 2 fluid ounces of the fumigant and pack the soil tight over the entrance hole to retain the gas.

Carbon disulfide and methyl bromide are poisonous gases, and methyl bromide lacks a distinctive odor. Do not inhale the fumes of either fumigant. Handle both materials carefully according to directions given on the containers. Store them in a cool place.

Carbon disulfide is inflammable and explosive. Never open a container of it where there is little air in circulation, or expose it near fire in any form.

Methyl bromide is particularly dangerous at high temperatures. Do not store it in buildings where people live or work.

### Need for Repeated Inspection and Treatment

A colony may become inactive soon after it is treated with an insecticide, appear as though dead, sometimes for several months, and then resume apparently normal activity. Two or more

dust or fumigant treatments 2 or 3 weeks apart are frequently necessary before a colony is destroyed or its activity suspended for a long period. If the ants have plenty of stored food and are disturbed, they may close the entrance and stay underground for many months at a time. All treated areas should be inspected from time to time after treatment so that surviving ants can be killed by re-treatment.

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The scientific name of the red harvester ant is Pogonomyrmex barbatus (F. Smith).

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Prepared by the  
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